

## PLATE XXXIX.

*Exospheroma gigas*, p. 553.*n.s.* Lines showing actual length and breadth of specimen figured.*a.s., a.i.* First and second antennæ.*e.p., l.s.* Epistome and upper lip.*m., m.* Mandibles. The right mandible from the outer side; the left mandible from the inner side, without its palp.*l.i.* Lower lip.*m.x. 1, m.x. 2.* First and second maxillæ.*m.x.p.* Maxillipeds.*pp.p.* First peræopod (third trunk-leg).*Per.s. 7♂.* Appendages of male on ventral margin of seventh peræon-segment.*plp. 2♂.* Appendage of male on inner side of second pleopod.

The mouth-organs are all drawn to the same scale, but with higher magnification of the apical spines and setæ of the first maxilla, and of one setiform spine of the second maxilla. A uniform but lower scale applies to the two antennæ, the peræopod, and the male appendages.

2. On some Crustaceans from the South Pacific.—Part IV.  
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 bridge.

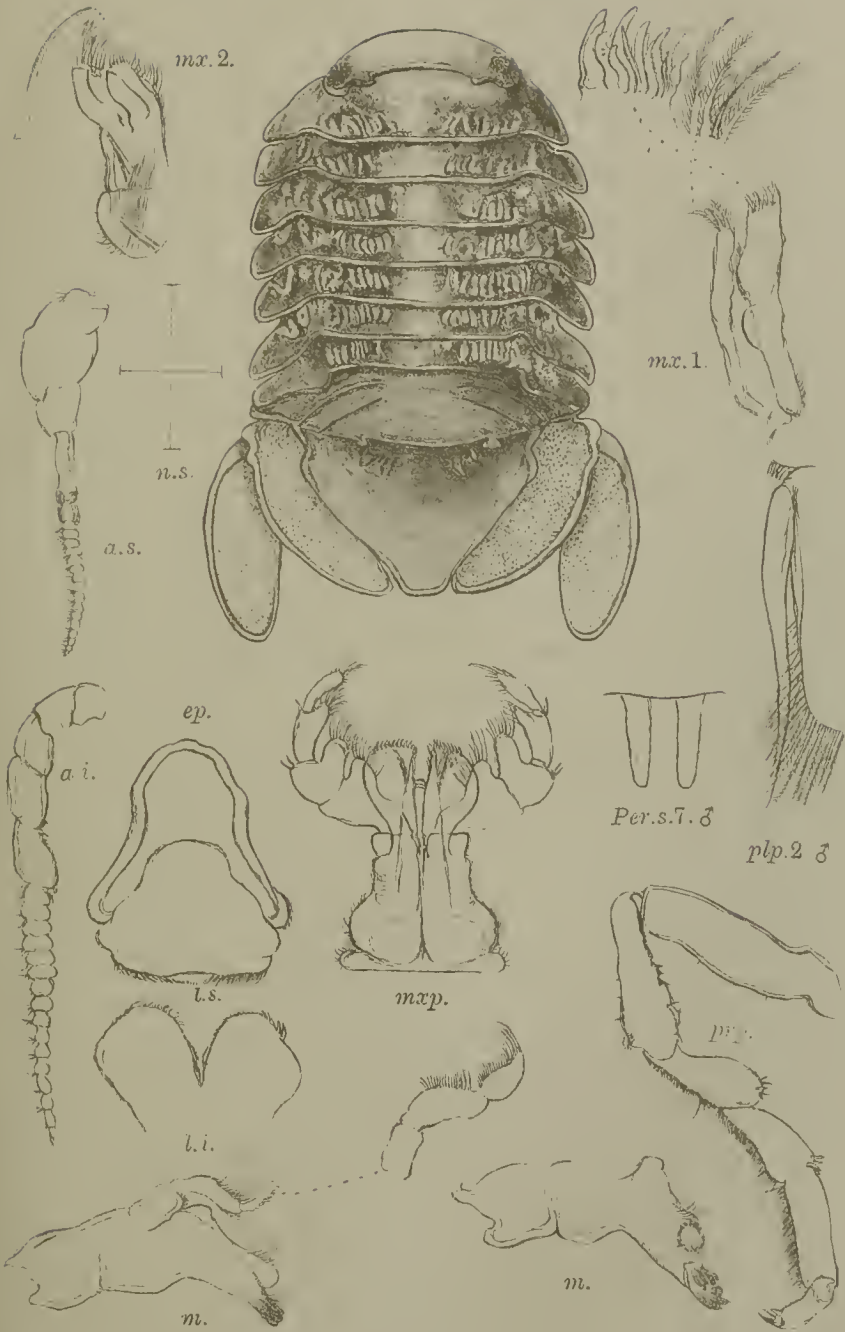
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(Plates XL.—XLII.)

The collections described in the following report were made in the islands of Funafuti (Ellice group), Rotuma, and Fiji by Mr. J. Stanley Gardiner, to whose kindness I am indebted for permission to examine them. They contain altogether examples of 77 species, of which seven appear to be new to science. All the known species have been already recorded from the Indo-Pacific region, and the new ones present no particularly remarkable features, although it has proved impossible to place one of them in any known genus, and a new division of that rank has been established for it.

The Funafuti collection contained examples of the following species:—

1. *Cryptodromia hilgendorfi* de Man.
2. *Ebalia erosa* (A. M.-Edw.).
3. *Calappa hepatica* (Linn.).
4. *Xenocarcinoides rostratus*, n. sp.
5. *Mencæthius monoceros* (Latr.).
6. *Goniocaphyra truncatifrons* de Man.
7. *Carupa læviuscula* Heller.
8. *Neptunus (Achelous) granulatus* (H. M.-Edw.).
9. *Thalamita admete* (Herbst), var. *edwardsi*, n. nom.
10. *Thalamita integra* Dana.
11. *Pseudozius inornatus* Dana.
12. *Pseudozius caystrus* (Ad. & Wh.).
13. *Pilumnus prunosus* Whitelegge.
14. *Cymo andreossi* (Aud.), var. *melanodactylus* Dana.
15. *Xanthius tamarckii* (H. M.-Edw.).





16. *Daira perlata* (Herbst).
17. *Atergatis floridus* (Rumph.).
18. *Chlorodius niger* (Forskål).
19. *Chlorodopsis spinipes* (Heller).
20. *Chlorodopsis* (*Cyclodius*) *ornata* Dana.
21. *Etisodes frontalis* Dana.
22. *Eriphia levimana* Latr.
23. *Eriphia scabricula* Dana.
24. *Trapezia ferruginea* Latr.
  - Var. *dentata* (Macleay).
  - Var. *areolata* Dana.
  - Var. *guttata* Rüppell.
25. *Trapezia digitalis* Latr.
  - Var. *speciosa* Dana.
26. *Trapezia cymodoce* Herbst.
27. *Tetralia glaberrina* (Herbst).
28. *Plagusia speciosa* Dana.
29. *Leiolophus planissimus* (Herbst).
30. *Grapsus maculatus* (Catesby).
31. *Pachygrapsus levis*, n. sp.
32. *Geograpsus grayi* (H. M.-Edw.).
33. *Sesarma gardineri*, n. sp.
34. *Cardiosoma hirtipes* Dana.
35. *Uca cultrimana* (White).
36. *Ocypode urvillei* Guérin.

The Rotuma collection contained:—

1. *Dromidiopsis australiensis* (Hasw.).
2. *Dromidia globosa* (Lam.).
3. *Calappa hepatica* (Linn.).
4. *Camposcia retusa* Latr.
5. *Hyastenus elegans* Miers, var. *tenuicornis*, nov.
6. *Tylocarcinus styx* (Herbst).
7. *Cyclax* (*Cyclomaia*) *suborbicularis* (Stimps.).
8. *Elamene truncata* A. M.-Edw.
9. *Kraussia rastripes* Müller.
10. *Thalamita admete* Herbst.
11. *Thalamita prymna* Herbst, var. *spiniimana* Dana.
  - Var. *pieta* Stimps.
  - Var. *stimpsoni* A. M.-Edw.
12. *Caphyra rotundifrons* A. M.-Edw.
13. *Pseudozius caystrus* (Ad. & Wh.).
14. *Melia tessellata* (Latr.).
15. *Pilumnus rotumanus*, n. sp.
16. *Cymo andreossyi* (Aud.).
  - Var. *melanodactylus* Dana.
17. *Xanthias notatus* (Dana).
18. *Xanthias lamarcki* (H. M.-Edw.).
19. *Xanthias parvus*, n. sp.
20. *Liomera richtersi* (de Man).
21. *Liomera levis* (Dana).

22. *Actæa tomentosa* (H. M.-Edw.).
23. *Actæa affinis* (Dana).
24. *Actæa hirtissima* (Rüppell).
25. *Actæa rufopunctata* (H. M.-Edw.).
26. *Actæa speciosa* (Dana).
27. *Actæa fossulata* (Girard).
28. *Zozimus æneus* (Linn.).
29. *Atergatus floridus* (Rumph.).
30. *Carpilius maculatus* (Linn.).
31. *Carpilius convexus* (Forskål).
32. *Carpiliodes tristis* Dana.
33. *Carpiliodes vuilliantianus* (A. M.-Edw.).
34. *Carpiliodes monticulosus* A. M.-Edw.
35. *Carpiliodes pallidus*, n. sp.
36. *Euxanthus melissa* (Herbst).
37. *Chlorodius niger* (Forskål).
38. *Chlorodius barbatus*, n. sp.
39. *Phymodius ungulatus* (H. M.-Edw.).
40. *Etisus lævimanus* Randall.
41. *Etisodes anaglyptus* (H. M.-Edw.).
42. *Etisodes frontalis* Dana.
43. *Chlorodopsis (Cyclodius) ornata* Dana.
44. *Euruppellia annulipes* (H. M.-Edw.).
45. *Eriphia lævimana* Latr.
46. *Eriphia scabricula* Dana.
47. *Trapezia ferruginea* Latr  
     Var. *dentata* (Macleay).  
     Var. *areolata* Dana.  
     Var. *guttata* Rüppell.  
     Var. *maculata* (Macleay).
48. *Trapezia digitalis* Latr., var. *speciosa* Dana.
49. *Trapezia cymodoce* (Herbst).
50. *Tetralia glaberrima* (Herbst).
51. *Plagusia speciosa* Dana.
52. *Leiolophus planissimus* (Herbst).
53. *Grapsus maculatus* (Catesby).
54. *Geograpsus grayi* (H. M.-Edw.).
55. *Sesarma aubryi* A. M.-Edw.
56. *Sesarma gardineri*, n. sp.
57. *Cardiosoma hirtipes* Dana.
58. *Cardiosoma carnifex* (Herbst).
59. *Uca cultrimana* (White).
60. *Ocypode ceratophthalma* (Pallas).

The Fiji collection :—

1. *Dromidiopsis australiensis* (Hasw.).
2. *Pilumnus hirsutus* Stimps.
3. *Actumnus setifer* de Haan.
4. *Actæa tomentosu* (H. M.-Edw.).
5. *Puchygrapsus minutus* A. M.-Edw.



The classification followed is that of Ortmann, in Bronn's 'Thier-reich.' In one or two points, however, slight deviations from this scheme will be found. The three tribes of Crabs seem still to have enough in common to justify us in keeping the old name of Brachyura in its full extent; and I have accordingly adopted de Haan's term Brachygnatha for the groups included by Ortmann in his restricted Brachyura. Following the latter writer's suggestion as to the inclusion of *Thia* Leach in the Ateleyclidæ, it is proposed to transfer Alcock's *Thiina*<sup>1</sup> bodily to that family, and *Kraussia* Dana is accordingly classed here. Lastly, under the heading Portunidæ, there will be found certain suggestions for an amplification of Ortmann's classification, notably the establishment of a new subfamily for the genus *Goniocaphyra* de Man.

Major Alcock's admirable series of papers on the Indian Crabs<sup>2</sup>, containing as they do diagnoses and bibliographies for a large number of the species included in the present collection, make it unnecessary to give more than a very short list of references for these species. For the sake of convenience, however, a reference to the original description and, when possible, to a figure, is given, together with one to Major Alcock's work. In the case of species mentioned also in Whitelegge's report on the Funafuti Crustacea, I have included a reference to that writer's paper.

## Suborder BRACHYURA.

### Tribe DROMIIDEA.

#### Family DROMIIDÆ.

#### Genus CRYPTODROMIA Stimps., 1858.

##### 1. CRYPTODROMIA HILGENDORFI de Man, 1887.

*Cryptodromia hilgendorfi*, de Man, Arch. Naturg. liii. 1, iii. p. 406, pl. xviii. fig. 4 (1887).

Three males from Funafuti, one dredged in the lagoon at a depth of 23 fathoms. This latter specimen carries a big sponge.

#### Genus DROMIDIA Stimps., 1858.

##### 2. DROMIDIA GLOBOSA (Lam.), 1818.

*Dromia globosa*, Lamarck, Hist. An. sans vert. v. p. 264 (1818); H. M.-Edwards, H. N. Crust. ii. p. 177 (1837).

*Dromidia globosa*, de Man, Arch. Naturg. liii. 1, iii. p. 396 (footnote), pl. xviii. fig. 1 (1887).

One male from Rotuma, bearing an ascidian. The tooth at the side of the carapace is rather farther back than is indicated in de Man's figure. The locality of this species has hitherto been unknown.

<sup>1</sup> Journ. As. Soc. Bengal, lxviii. 2, i. p. 96 (1899).

<sup>2</sup> *Ibid.* lxiv., lxv., lxvii., lxviii.

## Genus DROMIDIOPSIS, nov.

According to Ortmann (Bronn's 'Thier-reich,' v. 2, p. 1155) *Dromidia* has no epipodite on the first leg (cheliped). Examination of the specimens of *D. australiensis* Haswell shows that in this species the epipodite is present. It seems necessary, therefore, to make a new genus for this species, and such others as may agree with it in this particular. The name proposed is *Dromidiopsis*.

Characters of *Dromidiopsis*, n. gen. :—

1. Rostrum triangular, with the sides not distinctly lobed.
2. Carapace slightly longer than broad.
3. Sternal furrows in the female reach the chelipeds, converge, but do not join, and end in a single ill-marked tubercle.
4. Gills phyllobranchiate.
5. Cheliped with epipodite.
6. 4th and 5th legs (last two walking-legs) subchelate.
7. Uropods present and visible in dorsal view in the angle between the 6th segment and the telson.

## 3. DROMIDIOPSIS AUSTRALIENSIS (Hasw.), 1882.

*Dromia australiensis*, Haswell, Proc. Linn. Soc. N. S. W. vi. 4, p. 755 (1882); id. Cat. Austral. Crust. p. 139 (1882).

*Dromidia australiensis*, de Man, Arch. Naturg. liii. 1, iii. p. 396, pl. xvii. fig. 6 (1887).

Rotuma; one male bearing an ascidian.

Fiji; one male, one female.

## Tribe OXYSTOMATA.

## Family LEUCOSIIDÆ.

## Subfamily LEUCOSIINÆ.

## Genus EBALIA Leach, 1817.

## 4. EBALIA EROSA (A. M.-Edw.), 1873.

*Phlyxia erosa*, A. M.-Edwards, Journ. Mus. Godeffr. i. 4, p. 262 (1873); id. Nouv. Arch. Mus. x. p. 47, pl. iii. fig. 2 (1874).

*Ebalia erosa*, Miers, 'Challenger' Brachyura, p. 305 (1886); Alcock, J. As. Soc. Beng. lxxv. 2, p. 189 (1896).

Funafuti; one male.

## Family CALAPPIDÆ.

## Subfamily CALAPPINÆ.

## Genus CALAPPA Fabr., 1798.

## 5. CALAPPA HEPATICA (Linn.), 1764.

*Cancer hepaticus*, Linnæus, Mus. Lud. Ulr. p. 448 (1764).

*Calappa tuberculosa*, Guérin, Icon. R. A., Crust. pl. xii. fig. 2.

*Calappa hepatica*, de Haan, Faun. Japon., Crust. p. 70 (1833); Alcock, J. As. Soc. Beng. lxxv. 2, p. 142 (1896); Whitelegge, Mem. Austral. Mus. iii. 2, p. 139 (1897).

Funafuti; one male, one female.

Rotuma; one male, four females.

### Tribe BRACHYGNATHA.

#### Subtribe OXYRHYNCHA.

#### Family MAIIDÆ.

#### Subfamily INACHINÆ.

#### Genus CAMPOSCIA Latr., 1829.

#### 6. CAMPOSCIA RETUSA Latr., 1829.

*Camposcia retusa*, Latreille, Cuvier's R. An. (2) p. 60 (1829); A. M.-Edwards, H. N. Crust. i. p. 283, pl. xv. figs. 15, 16 (1834); Alcock, J. As. Soc. Beng. lxxiv. 2, p. 184 (1895).

Rotuma; one male.

#### Subfamily ACANTHONYCHINÆ.

#### Genus XENOCARCINOIDES, nov.

Characters of *Xenocarcinoides*, n. gen. :—

Rostrum long, compressed, above faintly grooved and notched at the tip, below hollowed and bearing on each side a thin wing.

Carapace elongate-triangular, bearing large tubercles.

Eyes moveable but not retractile, sunken in a pit formed by the side of the rostrum and the immoveable second joint of the second antenna. No pre- or postocular spines.

Antenna with 1st and 2nd joints fused, subtriangular. Flagellum hidden under rostrum.

Third maxilliped with the meropodite subquadrate, as broad as the ischiopodite, and bearing the carpopodite at its inner angle.

Chelipeds large; longer than either of the last three pairs of legs. (The second pair of legs are unfortunately wanting in the specimen.) The last three legs diminish gradually from before backwards. The dactyles are somewhat sickle-shaped, toothed below, and as long as the preceding joint.

The abdomen of the male is six-jointed, owing to fusion of joints 5 and 6, between which, however, a furrow can still be seen.

The genus differs from *Xenocarcinus* White in the shape of the carapace and rostrum, and in the larger size of the chelipeds.

#### 7. XENOCARCINOIDES ROSTRATUS, n. sp. (Plate XL. fig. 1.)

*Diagnosis*: "A *Xenocarcinoides* with the carapace provided with ten tubercles arranged in an anterior and a posterior group of five each, those of the hinder group being larger and more acute than



those of the anterior; chelipeds much larger than the last three legs, nearly as long as the rostrum; fingers shorter than the palm, fairly stout, enclosing a space at the base, with interlocking teeth at the tip; moveable finger with an isolated blunt tooth near the proximal end; walking-legs with the joints irregularly swollen; dactyles somewhat sickle-shaped, bearing spines and a few hairs below."

The third maxilliped and the abdomen of the male are shown in figs. 1 *a* and 1 *b*.

Colour in spirit, white.

Total length 13.5 mm. Length of carapace to base of rostrum 8.5 mm. Greatest breadth 7 mm.

Funafuti; one male.

#### Genus MENÆTHIUS H. M.-Edw., 1834.

##### 8. MENÆTHIUS MONOCEROS (Latr.), 1825.

*Pisa monoceros*, Latr. Encycl. x. p. 139 (1825).

*Menæthius monoceros*, H. M.-Edwards, H. N. Crust. i. p. 339 (1834); Alcock, J. As. Soc. Beng. lxiv. 2, p. 197 (1895).

*Menæthius unguatus*, *depressus*, *subserratus*, *tuberculatus*, *areolatus*, and *inornatus*, Dana, U.S. Expl. Exped., Crust. i. pp. 121-125, pl. iv. figs. 5-7 & pl. v. figs. 1-3 (1852).

Funafuti; two males.

The carapace in both specimens has the tubercles low and rounded but fairly numerous.

#### Subfamily PISINÆ.

#### Genus HYASTENUS White, 1847.

##### 9. HYASTENUS ELEGANS Miers, 1836, var. (Plate XL. fig. 2.)

*Hyastenus elegans*, Miers, 'Challenger' Brachyura, p. 58, pl. vi. fig. 3 (1886).

The specimens differ from the type in the following particulars:—

1. The horns are more slender and set wider apart at the base.

2. The larger tubercles of the carapace are more rounded; not so sharp.

3. The arrangement of tubercles in the fore part of the carapace is somewhat different (see figure).

Should it be thought advisable to give this variety a name, that of *tenuicornis* would be suitable.

Rotuma; two males, one female.

#### Genus TYLOCARCINUS Miers, 1879.

##### 10. TYLOCARCINUS STYX (Herbst), 1803.

*Cancer styx*, Herbst, Naturges. Krabb. u. Krebse, iii. 3, p. 53, pl. lviii. fig. 6 (1803).

*Microphrys styx*, A. M.-Edwards, Nouv. Arch. Mus. (1) viii. p. 247, pl. xi. fig. 4 (1872).

*Tylocarcinus styx*, Miers, Ann. Mag. Nat. Hist. (5) iv. p. 14 (1879); Alcock, Journ. As. Soc. Beng. lxiv. 2, p. 235 (1895).

Rotuma; eight males and eight females.

Two of the males have adult chelæ as in Milne-Edwards's figure. The length of these two is 20 and 18 mm. respectively, measured from the hinder end of the carapace to the tip of the rostral spines. Of the remaining six males, the two biggest were both exactly 16 mm. long; in one of these the two chelæ were both like those of the female and young male, in the other the left claw was that of the female and the right that of the grown male. All the other specimens had the chelæ of the female.

### Subfamily MAIINÆ.

#### Genus CYCLAX Dana, 1852.

##### 11. CYCLAX (CYCLOMAIA) SUBORBICULARIS (Stimps.), 1857.

*Mithrax suborbicularis*, Stimpson, Proc. Ac. Nat. Sci. Philad. 1857, p. 218.

*Cyclomaia margaritata*, A. M.-Edwards, Nouv. Arch. Mus. (1) viii. p. 236, pl. x. figs. 2, 3 (1872).

*Cyclax (Cyclomaia) suborbicularis*, Alcock, Journ. As. Soc. Beng. lxiv. 2, p. 245 (1895).

Rotuma; three males and three females.

Of the females one, 19 mm. long, had the sterna completely covered by the abdomen. The others, 17 and 18 mm. long respectively, showed a considerable stretch of the sterna bare on each side of the abdomen.

### Family HYMENOSOMIDÆ.

#### Genus ELAMENE H. M.-Edw., 1837.

##### 12. ELAMENE TRUNCATA A. M.-Edw., 1874.

*Elamene truncata*, A. M.-Edwards, Nouv. Arch. Mus. (1) x. p. 323 (1874).

Rotuma; one female.

### Subtribe CYCLOMETOPA.

#### Family ATELECYCLIDÆ.

It seems best to follow Ortmann in keeping this family distinct from the Cancridæ, and to place in it the subfamilies Atelecyclinæ, Acanthocyclinæ, and Thiinæ.

## Subfamily THINÆ.

## Genus KRAUSSIA Dana, 1852.

## 13. KRAUSSIA RASTRIPES Müller, 1887.

*Kraussia rastripes*, Müller, Verh. Nat. Ges. Basel, viii, 2, p. 480, pl. iv. fig. 5 (1887).

The ridges on the moveable finger of the specimen are not so distinctly tuberculated as in Müller's figure.

Rotuma; one female.

## Family CANCRIDÆ.

By the removal of the subfamilies of the Atelecyclidæ, the family Cancridæ becomes restricted to the Cancrinæ and Piri-melinæ, with perhaps also the Carcinidinæ (= Carcininæ). Thus narrowed it is essentially a circumpolar group, and it is not surprising that it is unrepresented in the present collection.

## Family PORTUNIDÆ.

The following tables, showing the schemes of classification adopted by Ortmann<sup>1</sup> and Alcock<sup>2</sup> respectively, make it clear that there is a considerable difference of opinion between the authors in question, though in the main they may be said to be in accord.

<i>Subfamilies.</i>	Alcock.	<i>Alliances.</i>	Ortmann.
			<i>Subfamilies.</i>
Portumninæ.	{	Carcinoida.	Portumninæ.
		Portumnoida.	
Portuninæ.	{	Portunoida.	Portuninæ.
		Cœnophthalmoida.	
Caphyrinæ.	—————		
Lupinæ.	{	Lupocycloida.	Carupinæ.
		Lupoida.	Thalaminæ.
		Podophthalmoida.	Podophthalminæ.

Roughly speaking Ortmann's subfamilies correspond to alliances in Alcock's classification, but there is considerable divergence in detail.

Neither author refers to the somewhat remarkable genus *Goniocaphyra* de Man, which is not only impossible to place in any subfamily of either author as defined, but appears to have a distinct standing of its own, and to deserve a separate subfamily for its reception.

<sup>1</sup> Ortmann, Bronn's 'Thier-reich,' v. 2, p. 1170 (1899).

<sup>2</sup> Alcock, Journ. Soc. As. Beng. lxxviii, 2, i. p. 6 (1899).

Under the circumstances it is perhaps best to retain the whole of Ortmann's subfamilies with the addition of two, or three, others—the *Caphyrinæ* for the genera *Caphyra* Guérin 1832, and *Sphærocarcinus* Zehnter 1894; a new subfamily *Goniocaphyrinæ*, for the single genus *Goniocaphyra* de Man 1837; and the *Carcinidinæ*, if it be thought needful to retain this group in the *Portunidæ*.

The following key embodies the leading characters of the subfamilies as it is here proposed to limit them:—

- I. Eystalks and orbits normal.
- A. Basal joint of 2nd or outer antenna narrow. [Flagellum of 2nd antenna not shut out from orbit.]
- i. Inner antennæ sloping. Front with a median tooth. Generally at least one pair of walking-legs as long as chelipeds.
1. Last pair of legs not distinctly natatorial ..... *Carcinidinæ*.  
 2. Last pair of legs distinctly natatorial ..... *Portumninæ*.
- ii. Inner antennæ transverse. Front with a median notch. Chelipeds longer than walking-legs.
1. 5th dactyles lanceolate ..... *Goniocaphyrinæ*.  
 2. 5th dactyles rounded ..... *Carupinæ*.
- B. Basal joint of antenna broad. [Chelipeds larger than walking-legs.]
- i. Flagellum of 2nd antenna not shut out from the orbit by a process of the basal joint ..... *Portuninæ*.  
 ii. Flagellum of 2nd antenna shut out from the orbit by a process of the basal joint. [5th legs natatorial.]
1. Last joint of 5th legs sickle-shaped ..... *Caphyrinæ*.  
 2. Last joint of 5th legs flattened ..... *Thalamitinæ*.
- II. Eystalks enormously long, orbits extend across the whole fore edge of the carapace. [5th legs natatory. Chelipeds longer than legs. Antennæ free; basal joint short; flagellum not shut out from orbit.] ..... *Podophthalminæ*.

#### Subfamily GONIOCAPHYRINÆ.

Characters of *Goniocaphyrinæ*, n. subfam. :—

1. Carapace broad.
2. Antero-lateral edge with 5 teeth.
3. Front truncate, slightly notched in the middle.
4. Legs slender; chelipeds somewhat longer than walking-legs.
5. Last pair of legs with lanceolate dactyles.
6. Basal joint of antenna enters the orbital gap but does not wholly fill it. Flagellum not shut out from orbit by a process of the basal joint.
7. Antennules transverse.

#### Genus GONIOCAPHYRA de Man, 1887.

##### 14. GONIOCAPHYRA TRUNCATIFRONS de Man, 1887.

*Goniocaphyra truncatifrons*, de Man, Arch. Naturg. liii. 1, iii. p. 339, pl. xiv. fig. 1 (1887).

Funafuti; one male.



## Subfamily CARUPINÆ.

## Genus CARUPA Dana, 1850.

## 15. CARUPA LÆVIUSCULA Heller, 1862.

*Carupa læviuscula*, Heller, Verh. zool.-bot. Ges. Wien, xii. p. 520 (1862); id. 'Novara' Crust. p. 27, pl. iii. fig. 2 (1868); Alcock, Journ. As. Soc. Beng. lxxviii. 2, i. p. 26 (1899).

Funafuti; one male.

## Subfamily PORTUNINÆ.

## Genus NEPTUNUS de Haan, 1833.

*Neptunus*, de Haan, Faun. Japon., Crust. p. 7 (1833); Alcock, Journ. As. Soc. Beng. lxxviii. 2, i. p. 28 (1899); Ortmann, Bronn's 'Thier-reich,' v. 2, p. 1171 (1899).

*Portunus*, Rathbun, Proc. Biol. Soc. Wash. xi. pp. 155 & 160 (1897); id. Proc. U.S. Nat. Mus. xxii. p. 289 (1900).

I am unable to agree with the alteration of the name of this genus proposed by Miss Rathbun. On the subject of Latreille's "types" I am in full agreement with the position taken up by Stebbing (Nat. Sci. xii. p. 239).

## 16. NEPTUNUS (ACHELOUS) GRANULATUS (H. M.-Edw.), 1834.

*Lupea granulata*, H. M.-Edwards, H. N. Crust. i. p. 454 (1834).

*Amphitrite speciosa*, Dana, Proc. Ac. Nat. Sci. Philad. 1852, p. 84; id. U.S. Expl. Exped., Crust. i. p. 276, pl. xvii. fig. 1 (1852).

*Achelous granulatus*, A. M.-Edwards, Arch. Mus. x. p. 344 (1861).

*Neptunus (Achelous) granulatus*, Miers, 'Challenger' Brachyura, p. 180 (1886); Alcock, Journ. As. Soc. Beng. lxxviii. 2, i. p. 45 (1899).

Funafuti; four males.

## Subfamily THALAMITINÆ.

## Genus THALAMITA Latr., 1829.

## 17. THALAMITA PRYMNA (Herbst), 1803.

*Cancer prymna*, Herbst, Naturges. Krabb. u. Krebse, iii. 3, p. 41, pl. lvii. fig. 2 (1803).

*Thalamita prymna*, H. M.-Edwards, H. N. Crust. i. p. 461 (1834); Alcock, Journ. As. Soc. Beng. lxxviii. 2, i. pp. 76, 78.

Alcock supports Kossman's view that all the forms of *Thalamita* with an eight-lobed front and a very broad basal joint to the antenna are but varieties of one species (*T. prymna*). The present collection contains no examples of the type, but three varieties are represented.



Var. *PICTA* Stimps., 1858.

*Thalamita picta*, Stimpson, Proc. Ac. N. Sci. Philad. 1858, p. 39; A. M.-Edwards, Nouv. Arch. Mus. (1) ix. p. 164, pl. iv. fig. 4 (1873); Alcock, Journ. As. Soc. Beng. lxxviii. 2, i. p. 79 (1899).

Rotuma; one male.

Var. *STIMPSONI* A. M.-Edw., 1861.

*Thalamita stimpsoni*, A. M.-Edwards, Arch. Mus. x. p. 362, pl. xxxv. fig. 4 (1861); Alcock, Journ. As. Soc. Beng. lxxviii. p. 79 (1899).

Var. *SPINIMANA* Dana, 1852.

*Thalamita spinimana*, Dana, U.S. Expl. Exped., Crust. i. p. 283, pl. xvii. fig. 8 (1852); A. M.-Edw. Arch. Mus. x. p. 364 (1861); id. Nouv. Arch. Mus. (1) ix. p. 165, pl. iv. fig. 5 (1873).

Rotuma; five males.

18. *THALAMITA ADMETE* (Herbst), 1803.

*Cancer admete*, Herbst, Naturges. Krabb. u. Krebse, iii. 3, p. 40, pl. lvii. fig. 1 (1803).

*Thalamita admete*, H. M.-Edw. H. N. Crust. i. p. 459 (1834); id. Cuvier's R. An. 2nd ed., Atlas Crust. pl. ix. fig. 2 (no date); Whitelegge, Mem. Austral. Mus. iii. 2, p. 138 (1897).

*Thalamita admeta*, Alcock, Journ. As. Soc. Beng. lxxviii. 2, i. p. 32 (1899).

Rotuma; three males.

Var. *EDWARDSI*, n. nom.

*Thalamita admete*, A. M.-Edwards, Arch. Mus. Paris, x. p. 356 (1861).

Alcock (J. As. Soc. Beng. lxxviii. p. 84) points out the existence of three varieties of this species. It is at present convenient to have a name for such forms, and accordingly it is here proposed to call Alcock's var. (2) *edwardsi*, after Prof. A. Milne-Edwards, who described it.

Funafuti; one male.

19. *THALAMITA INTEGRATA* Dana, 1852.

*Thalamita integra*, Dana, Proc. Ac. N. Sci. Philad. 1852, p. 85; id. U.S. Expl. Exped., Crust. i. p. 281, pl. xvii. fig. 6 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 138 (1897); Alcock, Journ. As. Soc. Beng. lxxviii. 2, i. p. 85 (1899).

Funafuti; seven males, six females.

#### Subfamily CAPHYRINÆ.

#### Genus CAPHYRA Guérin, 1832.

20. *CAPHYRA ROTUNDIFRONS* (A. M.-Edw.), 1869.

*Camptonyx rotundifrons*, A. M.-Edwards, Nouv. Arch. Mus. (1) v. p. 156, pl. vii. figs 11 & 12 (1869).

*Caphyra rotundifrons*, A. M.-Edwards, Nouv. Arch. Mus. (1) ix. p. 174 (1873).

Rotuma; fourteen males, five females.

Family XANTHIDÆ.

Subfamily MENIPPINÆ.

Genus PSEUDOZIUS Dana, 1851.

21. PSEUDOZIUS INORNATUS Dana, 1852.

*Pseudozius inornatus*, Dana, U.S. Expl. Exped., Crust. i. p. 234, pl. xiii. fig. 7 (1852).

The colour of this species as preserved in spirit is brown of varying shades with three pale longitudinal stripes on the carapace, indicated in Dana's figure. It is, I think, quite distinct from *P. caystrus* (Ad. & Wh.).

Funafuti; eight males, six females.

22. PSEUDOZIUS CAYSTRUS (Ad. & Wh.), 1848.

*Panopæus caystrus*, Adams & White, 'Samarang,' Crust. p. 42, pl. ix. fig. 2 (1848).

*Pseudozius caystrus*, Miers, 'Challenger' Brachyura, p. 142 (1886); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 181 (1898).

Rotuma; twenty-six males, thirty-eight females.

Funafuti; two males, six females.

Genus MELIA Latr., 1825.

23. MELIA TESSELATA (Latr.).

*Grapsus tessellatus*, Latreille, Encycl. Méth. pl. cccv. fig. 2.

*Melia tessellata*, Latreille, Encycl. x. p. 705 (1825); H. M.-Edwards, Cuvier's R. An. ed. 3, Atlas Crust. pl. xv. fig. 5 (no date); Dana, U.S. Expl. Exped., Crust. i. p. 242, pl. xiv. fig. 1 (1852).

*Melia tresselata*, H. M.-Edw. Coll. Mus. pl. xviii. fig. 8; id. H. N. Crust. i. p. 431, pl. xviii. figs. 8, 9 (1834).

Rotuma; two males, five females.

Genus ACTUMNUS Dana, 1851.

24. ACTUMNUS SETIFER (de Haan), 1835.

*Cancer (Pilumnus) setifer*, de Haan, Faun. Japon., Crust. p. 50, pl. iii. fig. 3 (1835).

*Actumnus setifer*, A. M.-Edwards, Nouv. Arch. Mus. (1) i. p. 287, pl. xv. fig. 5 (1865); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 202 (1898).

Fiji; one male.

Genus *PILUMNUS* Leach, 1815.

25. ? *PILUMNUS HIRSUTUS* Stimps., 1858. (Plate XLII. fig. 9.)

*Pilumnus hirsutus*, Stimpson, Proc. Ac. N. Sci. Philad. 1858, p. 37; Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 197 (1898).

Owing to this species never having been figured, I am in some doubt as to whether the present specimens are rightly identified. The figure now given will, I hope, serve to clear up the difficulty.

Fiji; ten males, thirteen females.

26. *PILUMNUS PRUNOSUS* Whitelegge, 1897.

*Pilumnus prunosus*, Whitelegge, Mem. Austral. Mus. iii. 2, p. 133, pl. vi. fig. 1 (1897).

Funafuti; seven males, two females.

27. *PILUMNUS ROTUMANUS*, n. sp. (Plate XLI. fig. 6.)

*Diagnosis*: "A *Pilumnus* with the carapace smooth, the areas fairly well delimited, covered with a fine fur and long hairs; no tubercles on the carapace or limbs except a few obsolete ones on the outside of the wrist; antero-lateral edge with 3 sharp teeth, the first two procurved, the last shorter and straighter; the outer angle of the orbit sharp but not a tooth; the rim of the orbit with two distinct notches, above and below the outer angle, and also a distinct notch on the upper rim; no subhepatic spine; limbs slender, covered with long hair; chelipeds subequal; walking-legs with a spine at the end of the merus and one at a distance of about one third of the length of the joint from the end of its upper edge; hands slender, fingers grooved outside, a spine in front of the wrist and one on the upper edge of the arm."

Breadth of fronto-orbital border : greatest breadth :: 3 : 4.

Length on middle line somewhat less than greatest breadth.

Length, 17 mm.

Colour in spirit, white.

Rotuma; one female.

## Subfamily XANTHINÆ.

Genus *CYMO* de Haan, 1833.

28. *CYMO ANDREOSSYI* (Aud.), 1826.

*Pilumnus andreossyi*, Audouin, Savigny's 'Egypte,' p. 86, pl. v. fig. 5 (1826).

*Cancer (Cymo) andreossyi*, de Haan, Faun. Japon., Crust. p. 22.

*Cymo andreossyi*, Dana, U.S. Expl. Exped., Crust. i. p. 225, pl. xiii. fig. 2 (1852); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 173 (1898).

Rotuma; one female.

Var. *MELANODACTYLUS* Dana, 1852.

*Cancer (Cymo) melanodactylus*, de Haan, Faun. Japon., Crust. p. 22 (1833).

*Cymo melanodactylus*, Dana, U.S. Expl. Exped., Crust. i. p. 225, pl. xiii. fig. 1 (1852); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 174 (1898).

*Cymo andreossyi* var. *melanodactylus*, Miers, Zool. 'Alert,' p. 557 (1884).

De Haan appears to have named this variety without describing it.

Funafuti; one male, one female.

Rotuma; one female.

#### Genus XANTHIAS Rathbun, 1897.

*Xanthodes*, Dana, Proc. Ac. N. Sci. Philad., May 1852, p. 75; Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 156 (1898).

*Xantho*, Ortmann, Zool. Jahrb. vii. Syst. p. 443 (1893), in part.

*Xanthias*, Rathbun, Proc. Biol. Soc. Wash. xi. p. 165 (1897).

#### 29. XANTHIAS LAMARCKI (H. M.-Edw.), 1834.

*Xantho lamarckii*, H. M.-Edwards, H. N. Crust. i. p. 391 (1834).

*Xanthodes lamarckii*, A. M.-Edwards, Nouv. Arch. Mus. ix. p. 200, pl. vii. fig. 3 (1873); Whitelegge, Mem. Austral. Mus. iii. 2, p. 130 (1897); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 157 (1898).

Funafuti; one female.

Rotuma; one male.

#### 30. XANTHIAS NOTATUS (Dana), 1852.

*Xanthodes notatus*, Dana, Proc. Ac. N. Sci. Philad. 1852, p. 76; id. U.S. Expl. Exped., Crust. i. p. 178, pl. viii. fig. 12 (1852); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 158 (1898).

Rotuma; one female.

#### 31. XANTHIAS PARVUS, n. sp. (Plate XLI. fig. 5.)

*Diagnosis*: "A *Xanthias* with the carapace minutely granular, clearly delimited into the areas characteristic of the genus; the antero-lateral edge on each side with four teeth, of which the first two are very low and blunt and the last two somewhat sharper; the front fairly straight, rather deeply notched in the middle line, and separated at its outer ends by shallow notches from the swollen orbital rims; chelipeds unequal, unlike, the larger with the hand more swollen and the fingers less gaping than the smaller, the wrist in both irregularly and coarsely rugose; the hand covered above and outside with fairly sharp conical tubercles, smooth below and inside; the cutting-edges of the fingers close set with bluntish rounded teeth, which in the large hand almost entirely fill up the gap between the fingers, but in the smaller leave a space towards the base of the fingers, the outside of the fingers grooved; the walking-legs stout, with a strong fringe of hairs on the upper edge, the last three joints hairy on the outside, the dactylopodite



rather longer than the propodite and ending in a long, slender, curved claw."

The third maxilliped is shown in fig. 5*a*, and the abdomen of the male in fig. 5*b*.

Colour in spirit brown, fingers darker.

Length 4.5 mm.

Rotuma; two males, four females.

Genus LIOMERA Dana, 1851.

32. LIOMERA RICHTERSI (de Man), 1889.

*Actæodes richtersi*, de Man, Zool. Jahrb. iv. Syst. p. 412, pl. ix. fig. 2 (1889).

*Liomera richtersi*, Ortmann, Zool. Jahrb. vii. Syst. p. 451 (1893).

Rotuma; one male.

33. LIOMERA LEVIS (Dana), 1852.

*Zozymus levis*, Dana, U.S. Expl. Exped., Crust. p. 191, pl. ix. fig. 5 (1852).

This species was placed by Dana in the genus *Zozymus*, but appears to belong to *Liomera* by all characters except the cristate form of the fore edge of the carapace.

Rotuma; one male.

Genus ACTÆA de Haan, 1833.

34. ACTÆA TOMENTOSA (H. M.-Edw.), 1834.

*Zozymus tomentosus*, H. M.-Edwards, H. N. Crust. p. 385 (1834); id. Cuvier's R. An. 3rd ed., Atlas Crust. pl. xi. *bis* fig. 2 (no date).

*Actæa tomentosa*, A. M.-Edwards, Nouv. Arch. Mus. (1) i. p. 262 (1865); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 140 (1898).

Rotuma; seven males, seven females.

Fiji; one male.

35. ACTÆA AFFINIS (Dana), 1852.

*Actæodes affinis*, Dana, U.S. Expl. Exped., Crust. i. p. 197, pl. xi. fig. 3 (1852).

*Actæa affinis*, A. M.-Edwards, Nouv. Arch. Mus. (1) i. p. 263 (1865).

Rotuma; one male, five females.

36. ACTÆA HIRTISSIMA (Rüppell), 1830.

*Xantho hirtissima*, Rüppell, 24 Krabben, p. 26, pl. v. fig. 6 (1836).

*Cancer (Actæa) hirtissima*, de Haan, Faun. Japon., Crust. p. 18 (1833).

*Actæa hirtissima*, Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 141 (1898).

Rotuma; one male.



37. *ACTÆA RUFOPUNCTATA* (H. M.-Edw.), 1834.

*Xantho rufopunctatus*, H. M.-Edwards, H. N. Crust. i. p. 389 (1834).

*Actæa rufopunctata*, A. M.-Edwards, Nouv. Arch. Mus. (1) i. p. 268, pl. xviii. fig. 1 (1865); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 142 (1898).

Rotuma; one female.

38. *ACTÆA SPECIOSA* (Dana), 1852.

*Actæodes speciosa*, Dana, U.S. Expl. Exped., Crust. i. p. 198, pl. xi. fig. 4 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 136 (1897).

*Actæa speciosa*, A. M.-Edwards, Nouv. Arch. Mus. (1) i. p. 274 (1865); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 143 (1898).

Rotuma; one female.

39. *ACTÆA FOSSULATA* (Girard), 1859.

*Cancer fossulata*, Girard, Ann. Soc. Entom. France (3) vii. p. 149, pl. iv. fig. 2 (1859).

*Actæa fossulata*, A. M.-Edwards, Nouv. Arch. Mus. (1) i. p. 270 (1865); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 148 (1898).

Rotuma; one male.

Genus *DAIRA* de Haan (1833).40. *DAIRA PERLATA* (Herbst), 1790.

*Cancer perlatus*, Herbst, Naturges. Krabb. u. Krebse, i. viii. p. 265, pl. xxi. fig. 122 (1790).

*Daira variolosa*, Dana, U.S. Expl. Exped., Crust. i. p. 202, pl. x. fig. 4 (1852).

*Daira perlata*, Whitelegge, Mem. Austral. Mus. iii. 2, p. 131 (1897); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 155 (1898).

Funafuti; one male, two females.

Genus *ZOZIMUS* Leach, 1818.

On the spelling of the name of this genus, see Rathbun, Proc. Biol. Soc. Wash. xi. p. 167 (1897).

41. *ZOZIMUS ÆNEUS* (Linn.), 1764.

*Cancer æneus*, Linnæus, Mus. Lud. Ulr. p. 451 (1764).

*Zozymus æneus*, H. M.-Edwards, H. N. Crust. i. p. 385 (1834); Dana, U.S. Expl. Exped., Crust. i. p. 192, pl. x. fig. 3 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 134 (1877); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 104 (1898).

Rotuma; two males.

## Genus ATERGATIS de Haan (1833).

## 42. ATERGATIS FLORIDUS (Rumph.).

*Cancer florilus*, Rumph. Amboinsch. Rariteitk. p. 16, pl. viii. fig. 5 (1705); Linnæus, Syst. Nat. 12th ed. p. 1041 (1766).

*Cancer (Atergatis) floridus*, de Haan, Faun. Japon., Crust. p. 40.  
*Atergatis floridus*, Dana, U.S. Expl. Exped., Crust. i. p. 159, pl. vii. fig. 4 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 129 (1897); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 98 (1898).

Funafuti; one male, two females.

Rotuma; two males, two females.

## Subfamily CARPILIINÆ.

## Genus CARPILIUS Desmarest, 1825.

## 43. CARPILIUS MACULATUS (Linn.), 1764.

*Cancer maculatus*, Linnæus, Mus. Lud. Ulr. p. 433 (1764).

*Carpilius maculatus*, H. M.-Edwards, H. N. Crust. i. p. 382 (1834); id. Cuvier's R. An. 3rd ed., Atlas Crust. pl. xi. fig. 2 (no date); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 79 (1898).

Rotuma; one female.

## 44. CARPILIUS CONVEXUS (Forskål), 1775.

*Cancer convexus*, Forskål, Descr. Anim. p. 88 (1775).

*Carpilius convexus*, Rüppell, Krabben roth. Meer. p. 13, pl. iii. fig. 2, & pl. vi. fig. 6 (1830); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 80 (1898).

Rotuma; two males.

## Genus CARPILIODES Dana, 1851.

## 45. CARPILIODES TRISTIS Dana, 1852.

*Carpiliodes tristis*, Dana, U.S. Expl. Exped., Crust. i. p. 193, pl. ix. fig. 7 (1852); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 82 (1898).

Rotuma; two males.

## 46. CARPILIODES VAILLIANTIANUS (A. M.-Edw.), 1862.

*Carpilioxanthus vailliantianus*, A. M.-Edwards, Mailliard's 'Réunion,' Annexe F, p. 3 (1862).

*Carpiliodes vailliantianus*, A. M.-Edwards, Nouv. Arch. Mus. (1) i. p. 231. pl. xi. fig. 3 (1865); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 85 (1898).

Rotuma; one male, two females.

## 47. CARPILIODES MONTICULOSUS A. M.-Edw., 1873.

*Carpiliodes monticulosus*, A. M.-Edwards, Nouv. Arch. Mus. (1)

ix. p. 181, pl. v. fig. 1 (1873); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 86 (1898).

Rotuma; one male.

48. *CARPILIODES PALLIDUS*, n. sp. (Plate XL. fig. 3.)

*Diagnosis*: "A *Carpiliodes* the length of whose carapace is to the greatest breadth as 7: 11, with the carapace covered with vesiculous granules, lobulated as in *C. monticulosus*, but with the furrows not so deep; the front slightly sinuous, with a sharp, but not very deep, notch in the middle, extending at its outer ends in front of the orbital rims, from which it is separated by transverse grooves: the chelipeds equal, alike, above and outside granular like the rest of the body and limbs, below smooth; on the outside of the hands five more or less distinct grooves, of which the two lower run on to the immoveable finger and the upper one on to the moveable finger, while the middle two are less distinct than the others; the cutting-edges of the fingers with several blunt conical teeth, which are set closer together on the immoveable than on the moveable finger. The walking-legs granular, with a few scattered hairs; the propodites very short and broad; the dactylopodites about equal to the propodites in length, armed at the end with a rather short, almost straight claw."

The third maxilliped is shown in fig. 3*a*, and the abdomen of the male in fig. 3*b*.

Colours in spirit: carapace white; walking-legs pink, with the dactyle and half the propodite white; chelipeds pink, with the fingers white or pale brown with pink bases.

Length 3.5 mm.

The most characteristic feature of the species is its coloration; in most respects it shows a considerable resemblance to *C. monticulosus*.

Rotuma; three males, one female.

Genus *EUXANTHUS* Dana, 1851.

49. *EUXANTHUS MELISSA* (Herbst), 1801.

*Cancer melissa*, Herbst, Naturges. Krabb. u. Krebse, iii. 2. p. 7, pl. li. fig. 1 (1801).

*Euxanthus melissa*, Stimpson, Proc. Ac. Sci. Philad. 1858, p. 33; Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 110 (1898).

*Euxanthus mamillatus*, A. M.-Edwards, Nouv. Arch. Mus. (1) i. p. 193, pl. xv. fig. 2 (1865).

The fingers of this species are hollowed at the tip as stated by Alcock (p. 110). In his generic key (p. 75) the same author says that the fingers in this genus are pointed.

Rotuma; three males, two females.

Genus *CHLORODIUS* H. M.-Edw., 1834.

*Chlorodius*, Rüppell, Krabben roth. Meer. p. 20 (1830).

*Chlorodius*, H. M.-Edwards, H. N. Crust. i. p. 399 (1834); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 159 (1898).

*Chlorodiella*, Rathbun, Proc. Biol. Soc. Wash. xi. p. 157 (1897);  
Ortmann, Broun's 'Thier-reich,' v. 2, p. 1172 (1899).

Not *Clorodius* Desmarest, 1823; de Haan, 1833.

I am unable to agree with Rathbun and Ortmann as to the necessity for a new name for this genus, and prefer to follow Alcock in considering that Milne-Edwards's name holds good.

50. *CHLORODIUS NIGER* (Forskål), 1775.

*Cancer niger*, Forskål, Descr. Anim. p. 89 (1775).

*Clorodius niger*, Rüppell, Krabben roth. Meer. p. 20, pl. iv. fig. 7 & pl. vi. fig. 14.

*Chlorodius niger*, H. M.-Edwards, H. N. Crust. i. p. 401 (1834);  
Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 160 (1898).

The lobes of the antero-lateral edge in all the specimens are low and rounded, and not procurved into spines.

Funafuti; one male, one female.

Rotuma; five males, four females.

51. *CHLORODIUS BARBATUS*, n. sp. (Plate XLI. fig. 4.)

*Diagnosis*: "A small *Chlorodius* with the areas of the carapace faintly demarked; chelipeds unequal; the fingers of the large hand widely gaping, less strongly toothed than in *C. lævissimus* Dana 1852, and more hollowed at the tip; the large hand bearing a tuft of hairs at the base of the fingers on the outside, hiding the proximal part of the fingers; the first tooth of the antero-lateral edge wanting altogether, and not, as in *C. lævissimus*, merely obsolescent."

The third maxilliped is shown in fig. 4*a*, and the abdomen of the male in fig. 4*b*.

Colour in spirit: white with brown fingers.

Measurements of largest specimen (a male): length 4.5 mm.; tip to tip of longest side-teeth 7 mm.; front 7 mm.; fronto-orbital breadth 6 mm.

The species is closely allied to *C. lævissimus* Dana, but differs from it in several points indicated in the definition.

Funafuti; thirty-five males and twenty-four females, all but one male from 15-25 fathoms.

Rotuma; eleven males, seven females.

Genus *PHYMODIUS* A. M.-Edw., 1863.

52. *PHYMODIUS UNGULATUS* (H. M.-Edw.), 1834.

*Chlorodius ungulatus*, H. M.-Edwards, H. N. Crust. i. p. 400, pl. xvi. figs. 6-8 (1834).

*Phymodius ungulatus*, A. M.-Edwards, Nouv. Arch. Mus. (1) ix. p. 218 (1873); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 102 (1898).

Rotuma; two males.



## Subfamily ETISINÆ.

## Genus ETISUS, H. M.-Edw., 1834.

## 53. ETISUS LEVISSIMUS Randall, 1839.

*Etisus levissimus*, Randall, Journ. Ac. Nat. Sci. Philad. 1839, p. 115; Dana, U.S. Expl. Exped., Crust. i. p. 185, pl. x. fig. 1 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 131 (1897); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 131 (1898).

Rotuma; one male.

## Genus ETISODES Dana, 1851.

## 54. ETISODES ANAGLYPTUS (H. M.-Edw.), 1834.

*Etisus anaglyptus*, H. M.-Edwards, H. N. Crust. i. p. 411 (1834).

*Cancer anaglyptus*, H. M.-Edwards, Cuvier's R. An. 3rd ed., Atlas Crust. pl. xi. fig. 4 (1849).

*Etisodes anaglyptus*, A. M.-Edwards, Nouv. Arch. Mus. (1) ix. p. 235 (1873); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 133 (1898).

Rotuma; one male.

## 55. ETISODES FRONTALIS Dana, 1852.

*Etisodes frontalis*, Dana, U.S. Expl. Exped., Crust. i. p. 187, pl. ix. fig. 3 (1852).

A small fifth tooth may be present or absent on the antero-lateral edge of the carapace in this species.

Rotuma; sixteen males, six females.

## Genus CHLORODOPSIS A. M.-Edw., 1873.

## 56. CHLORODOPSIS SPINIPES (Heller), 1861.

*Pilodius spinipes*, Heller, Abh. zool.-bot. Ges. Wien, 1861, p. 11.

*Chlorodopsis spinipes*, A. M.-Edwards, Nouv. Arch. Mus. (1) ix. p. 230, pl. viii. fig. 6 (1873); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 169 (1898).

Funafuti; two males, dredged in the lagoon in 15-25 fathoms of water.

## 57. CHLORODOPSIS (CYCLODIUS) ORNATA (Dana), 1852.

*Cyclodius ornatus*, Dana, Proc. Ac. N. Sci. Philad. 1852, p. 30; id. U.S. Expl. Exped., Crust. i. p. 223, pl. xii. fig. 11 (1852).

*Chlorodopsis (Cyclodius) ornata*, Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 171 (1893).

Funafuti; one male.

Rotuma; one male.



## Subfamily OZIINÆ.

## Genus EURUPPELLIA Dana, 1851.

58. EURUPPELLIA ANNULIPES (H. M.-Edw.), 1834.

*Ruppellia annulipes*, H. M.-Edwards, H. N. Crust. i. p. 422 (1834); Dana, U.S. Expl. Exped., Crust. i. p. 240, pl. xix. fig. 4 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 137 (1897).

*Euruppellia annulipes*, Miers, Zool. 'Alert,' p. 523 (1884).

*Ozius* (*Euruppellia*) *annulipes*, Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 188 (1898).

Rotuma; five females.

## Subfamily ERIPHIINÆ.

## Genus ERIPHIA, Latr.

59. ERIPHIA LÆVIMANA Latr.

*Eriphia lævimana*, Latreille, Coll. Mus. (fide H. M.-Edw.); Dana, U.S. Expl. Exped., Crust. i. p. 249, pl. xiv. fig. 7 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 137 (1897); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 214 (1898).

Funafuti; two males, one female.

Rotuma; two males, three females.

60. ERIPHIA SCABRICULA Dana, 1852.

*Eriphia scabricula*, Dana, Proc. Ac. N. Sci. Philad. 1852, p. 82; id. U.S. Expl. Exped., Crust. i. p. 247, pl. xiv. fig. 5 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 137 (1897); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 216 (1898).

Funafuti; seven males, five females.

Rotuma; two males.

## Subfamily TRAPEZIINÆ.

Ortmann's revision of this very difficult little group<sup>1</sup> is the authority followed in the present report.

## Genus TRAPEZIA Latr., 1825.

61. TRAPEZIA FERRUGINEA Latr., 1825.

*Trapezia ferruginea*, Latreille, Encycl. Méth. x. p. 695 (1825); Ortmann, Zool. Jahrb. x. Syst. 2, p. 205 (1897); Alcock, Journ. As. Soc. Beng. lxvii. 2, i. p. 220 (1893).

Var. TYPICA Ortm. 1897.

*Trapezia ferruginea*, Latreille, Alcock, *ll. cit.*

*Trapezia ferruginea typica*, Ortmann, *loc. cit.* pp. 203, 205.

<sup>1</sup> Ortmann, Zool. Jahrb. x. Syst. 2, p. 201 (1897).

*Trapezia cymodoce*, Dana, U.S. Expl. Exped., Crust. i. p. 257, pl. xiv. fig. 5 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 137 (1897).

Funafuti; two males and one female. Of these one male and one female from 30 fathoms.

Rotuma; two males.

Var. *DENTATA* (Macleay), 1838.

*Grapsillus dentatus*, Macleay, Smith's Illustr. Zool. S. Afr., Annulosa, p. 67 (1838).

*Trapezia ferruginea*, Dana, U.S. Expl. Exped., Crust. i. p. 260, pl. xvi. fig. 1 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 137 (1897).

*Trapezia dentata*, Dana, U.S. Expl. Exped., Crust. i. p. 258, pl. xvi. fig. 6 (1852).

*Trapezia ferruginea dentata*, Ortmann, *loc. cit.* pp. 203, 204.

Funafuti; one male.

Rotuma; one male, two females.

Var. *AREOLATA* Dana, 1852.

*Trapezia areolata*, Dana, U.S. Expl. Exped., Crust. i. p. 259, pl. xv. fig. 8 (1852).

*Trapezia ferruginea areolata*, Ortmann, *loc. cit.* pp. 203, 206.

Funafuti; one male, one female, the latter from 15 fathoms.

Rotuma; five males, five females.

Var. *GUTTATA* Rüppell, 1830.

*Trapezia guttata*, Rüppell, Krabben roth. Meer. p. 27 (1830); Miers, 'Challenger' Brachyura, p. 166, pl. xii. fig. 1 (1886).

*Trapezia ferruginea guttata*, Ortmann, *loc. cit.* pp. 203, 205.

Funafuti; one male.

Rotuma; three males, two females.

Var. *MACULATA* (Macleay), 1838.

*Grapsillus maculatus*, Macleay, Smith's Illustr. Zool. S. Afr., Annulosa, p. 67 (1838).

*Trapezia maculata*, Dana, U.S. Expl. Exped., Crust. i. p. 256, pl. xv. fig. 4 (1852); Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 221 (1898).

*Trapezia ferruginea maculata*, Ortmann, *loc. cit.* pp. 203, 206.

Rotuma; one male.

62. *TRAPEZIA DIGITALIS* Latr., 1825.

*Trapezia digitalis*, Latreille, Encycl. Méth. x. p. 696 (1825); Ortmann, *loc. cit.* pp. 203, 208; Alcock, Journ. As. Soc. Beng. lxxvii. 2, i. p. 232 (1898).

According to Ortmann the typical form of this species has been found only off the East Coast of Africa, namely, in the Red Sea and at Mauritius. Those from more easterly localities differ in colour. What the difference is Ortmann does not state.

Alcock includes in his definition of *T. digitalis* the fact that it is of a blackish-brown colour. My examples are of precisely the same coloration as the type variety of *T. ferruginea*.

Funafuti; two males.

Var. SPECIOSA Dana, 1852.

*Trapezia speciosa*, Dana, U.S. Expl. Exped., Crust. i. p. 253, pl. xv. fig. 1 (1852).

*Trapezia digitalis speciosa*, Ortmann, *loc. cit.* pp. 203, 208.

Funafuti; two females.

Rotuma; one female.

63. TRAPEZIA CYMODOCE (Herbst), 1801.

*Cancer cymodoce*, Herbst, *Naturg. Krabb. u. Krebse*, iii. 2, p. 22, pl. li. fig. 5 (1801).

*Trapezia hirtipes*, Jacquinet and Lucas, *Crust. of 'Astrolabe'*, iii. p. 44, pl. iv. fig. 14 (1853).

*Trapezia cymodoce*, Gerstäcker, *Arch. Naturg.* xxii. 1, p. 125 (1856); Ortmann, *loc. cit.* p. 203; Alcock, *Journ. As. Soc. Beng.* lxvii. 2, i. p. 219 (1898).

Funafuti; four males, three females, from various depths up to 30 fathoms.

Rotuma; two males, two females.

Genus TETRALIA Dana, 1851.

64. TETRALIA GLABERRIMA (Herbst), 1790.

*Cancer glaberrimus*, Herbst, *Naturg. Krabb. u. Krebse*, i. 8, p. 262, pl. xx. fig. 15 (1790).

*Tetralia nigrifrons* and *glaberrima*, Dana, U.S. Expl. Exped., *Crust. i.* pp. 262, 263, pl. xvi. figs. 2, 3 (1852).

*Tetralia cavimana*, Heller, *S.B. Ak. Wiss. Wien*, xliii. p. 353, pl. iii. figs. 24, 25 (1861); Whitelegge, *Mem. Austral. Mus.* iii. 2, p. 138 (1897).

*Tetralia glaberrima*, Ortmann, *loc. cit.* p. 209; Alcock, *Journ. As. Soc. Beng.* lxvii. 2, i. p. 223 (1898).

Funafuti; twelve males, fourteen females. Only one specimen (a female) had not the coloration of Dana's *nigrifrons*. This one agreed with Dana's *glaberrima* in all respects.

Rotuma; three males, four females, all agreeing with Dana's *nigrifrons*.

Subtribe CATOMETOPA.

Family GRAPSIDÆ.

Subfamily PLAGUSIINÆ.

Genus PLAGUSIA Latr., 1806.

65. PLAGUSIA SPECIOSA Dana, 1851.

*Plagusia speciosa*, Dana, *Proc. Ac. N. Sci. Philad.* 1851, p. 252;  
39\*

id. U.S. Expl. Exped., Crust. i. p. 369, pl. xxiii. fig. 9 (1852); Miers, Ann. Mag. N. H. (5) i. p. 151 (1878); Kingsley, Proc. Ac. N. Sci. Philad. 1880, p. 223.

Funafuti; one male.

Rotuma; one male.

#### Genus LEIOLOPHUS Miers, 1876.

##### 66. LEIOLOPHUS PLANISSIMUS (Herbst), 1804.

*Cancer planissimus*, Herbst, Naturg. Krabb. u. Krebse, iii. 4, pl. lix. fig. 3 (1804).

*Plagusia serripes*, Lamarck, An. sans Vert. p. 247 (1818).

*Leiolophus planissimus*, Miers, Cat. N. Z. Crust. p. 46 (1876); id. Ann. Mag. N. H. (5) i. p. 153 (1878); Whitelegge, Mem. Austral. Mus. iii. 2, p. 139 (1897).

Funafuti; two females.

Rotuma; three males, three females.

#### Subfamily GRAPSINÆ.

#### Genus GRAPSUS Lam., 1801.

##### 67. GRAPSUS MACULATUS (Catesby), 1771.

*Cancer grapsus*, Linnæus, Syst. Nat. 18th ed. p. 630 (1758).

*Pagurus maculatus*, Catesby, Nat. Hist. Carolinas, 3rd ed., ii. pl. xxxvi. fig. 1 (1771).

*Grapsus pictus*, Latreille, Hist. Crust. Ins. vi. p. 69, pl. xlvii. fig. 2 (1803).

*Grapsus maculatus*, *webbi*, *ornatus*, and *pharaonis*, H. M.-Edw. Ann. Sci. Nat. (3) xx. pp. 167-8, pl. vi. fig. 1 (1853).

*Grapsus maculatus*, Kingsley, Proc. Ac. N. Sci. Philad. 1880, p. 192; Whitelegge, Mem. Austral. Mus. iii. 2, p. 139 (1897).

Rotuma; one male.

#### Genus PACHYGRAPSUS Randall, 1839.

##### 68. PACHYGRAPSUS MINUTUS A. M.-Edw., 1873.

*Pachygrapsus minutus*, A. M.-Edwards, Nouv. Arch. Mus. (1) ix. p. 292, pl. xiv. fig. 2 (1873).

Fiji; five males, six females.

##### 69. PACHYGRAPSUS LÆVIS, n. sp. (Plate XLII. fig. 7.)

*Diagnosis*: "A *Pachygrapsus* with the front almost straight, very slightly concave; the frontal lobes seven in number—the median small and triangular, the submedians large, square, and placed before those on either side of them, the sublaterals smaller, triangular, not so far forward, the laterals large, rounded, and the most forwardly placed of all; the carapace smooth, with linear



ridges on the branchial regions and faint transverse markings on the front; no tooth behind that forming the orbital angle; the chelipeds smaller than in *P. minutus*, the hands less swollen, a ridge running along the lower part of the hand and continued on to the finger; the fingers spoon-like at the ends, which are fringed with short stiff hairs, the arm bearing at its distal end on the inner side a crest of three teeth, the wrist with a spine on the outside at the distal end; the legs slender and almost hairless; the meropodite of the walking-legs with one tooth above and two below at the outer end; the propodite slenderer than in *P. minutus*."

The third maxilliped is shown in fig. 7 a.

Colour in spirit: greenish, banded on the legs with brown.

Length 6 mm. Front 5 mm.; tip to tip of orbital spines 7.5 mm.

This species belongs to the group with no tooth behind the orbital angle, including *P. corrugatus* Martens 1872, *P. aethiopicus* Hilg. 1869, *P. minutus* A. M.-Edw. 1873, *P. plicatus* H. M.-Edw. 1837, and *P. longipes* Rathbun 1893.

Funafuti; one female.

#### Genus GEOGRAPSUS Stimps., 1858.

##### 70. GEOGRAPSUS GRAYI (H. M.-Edw.), 1853.

*Grapsus grayi*, H. M.-Edwards, Ann. Sci. Nat. (3) xx. p. 170 (1853).

*Geograpsus rubidus*, Stimpson, Proc. Ac. N. Sci. Philad. 1858, p. 103.

*Geograpsus grayi*, H. M.-Edwards, Nouv. Arch. Mus. (1) ix. p. 288 (1873); Kingsley, Proc. Ac. N. Sci. Philad. 1880, p. 196.

Funafuti; two males, four females.

Rotuma; one male, one female.

#### Subfamily SESARMINÆ.

##### Genus SESARMA Say, 1818.

##### 71. SESARMA AUBRYI A. M.-Edw., 1819.

*Sesarma (Holometopus) aubryi*, A. M.-Edwards, Nouv. Arch. Mus. (1) v. Bull. p. 29 (1869); (1) ix. p. 307, pl. xvi. fig. 2 (1873).

*Sesarma aubryi*, de Man, Zool. Jahrb. ii. Syst. 3, p. 642 (1887).

Rotuma; one male.

##### 72. SESARMA GARDINERI, n. sp. (Plate XLII. fig. 8.)

*Diagnosis.* "A *Sesarma* in which the front is half the fronto-orbital breadth, the latter rather less than the length of the carapace; the front hidden from above by the frontal lobes, the frontal edge divided into five shallow bights by four projections, not denticulate; the frontal lobes prominent, sharp, denticulate, the



inner pair much larger than the outer; the carapace irregularly granular, the granules largest just behind the frontal lobes, the branchial regions rugose; the sides with two teeth behind the orbital angle, the second tooth low and blunt; the walking-legs long and slender, their meropodites rugose with denticulate edges, bearing at the outer end two teeth above and none below and on the hinder side a low, rounded ridge, their carpopodites with two sharper ridges, their propodites long and flat, their dactylopodites broad and flat, diminishing gradually to a long straight spine, and having the edges hidden by a thick fur; the upper side of the hand in both sexes with two subparallel denticulate ridges, the inner less regular than the outer, and the two meeting at both ends so as to enclose an oval field, in which two or three tubercles may lie; the fingers rather shorter than the palm in the female, distinctly so in the male."

The third maxilliped and the abdomen of the male are shown in figs. 8 a and 8 b respectively.

Length 31 mm. Breadth of fronto-orbital border 27 mm.

The animal is described in Mr. Gardiner's notes as a "red tree-crab." The colour in spirit is an orange-yellow.

This species is not far from *S. oceanica* de Man, 1889, in Group II. of that author's classification of the genus [Zool. Jahrb. ii. Syst. 3, p. 639 (1887)], but differs in the ridges on the hand and in the more hairy dactyles.

Funafuti; three males, three females.

Rotuma; three males, one female.

#### Subfamily GECARCININÆ.

#### Genus CARDIOSOMA Latr., 1825.

##### 73. *CARDIOSOMA HIRTIPES* Dana, 1852.

*Cardiosoma hirtipes*, Dana, U.S. Expl. Exped., Crust. i. p. 376, pl. xxiv. fig. 2 (1852); de Man, Arch. Naturg. liii. 1, p. 349, pl. xiv. fig. 3 (1887); Ortmann, Zool. Jahrb. vii. Syst. p. 737 (1894); Whitelegge, Mem. Austral. Mus. iii. 2, p. 138 (1897).

Funafuti; three males, five females.

Rotuma; one male, one female.

##### 74. *CARDIOSOMA CARNIFEX* (Herbst), 1796.

*Cancer carnifex*, Herbst, Naturg. Krabb. u. Krebse, ii. 6, p. 163, pl. xli. fig. 7 (1796).

*Cardiosoma carnifex*, Latreille, Encycl. Méth. x. p. 685 (1825); Miers, 'Chall.' Brachyura, p. 220 (1886).

*Cardiosoma guanhami*, var. *carnifex*, Ortmann, Zool. Jahrb. vii. Syst. p. 735 (1894).

*Cardiosoma obscura*, Dana, U.S. Expl. Exped. p. 375, pl. xxiv. fig. 1 (1852).

Rotuma; one female.